

South Carolina's 2005 Horseshoe Crab Compliance Report

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I. Introduction

The Interstate Fishery Management Plan for Horseshoe Crabs (HSC), *Limulus polyphemus*, requires implementation of state management programs to meet the conservation, protection, and sustainable management goals of the plan. Horseshoe crabs caught in South Carolina waters are utilized, by law, for Limulus Amebocyte Lysate (LAL) production and returned to state waters except for a small number used in research and science instruction. The South Carolina Department of Natural Resources (SCDNR) Marine Resources Division (MRD) continues to monitor and report annual processing of horseshoe crabs by the sole biomedical facility presently operating in state, Charles River Endosafe (CRE) of Charleston, SC.

In 2005 the number processed in South Carolina dropped to 63% of last year's total, the highest number to date. This was not due to any decline in availability of crabs but to decline in demand for LAL because of both advances in product sensitivity and excess production from last year's record harvest.

This year the only change to the state's monitoring and management plan involved implementation of Addendum III (Appendix A) to further characterize the biomedical industry.

II. Request for *de minimis*

According to Addendum 1 to the Horseshoe Crab Fishery Management Plan, a state may apply for *de minimis* status if, for the last two years, their combined average commercial landings (by numbers) constitute less than one percent of coastwise commercial landings for the same two-year period. Since South Carolina does not allow any commercial harvest of horseshoe crabs for use as bait, but only for biomedical purposes, we qualify for *de minimis* and are hereby requesting *de minimis* status for South Carolina.

III. 2005 Fishery and Management Program

The use of horseshoe crabs for biomedical purposes as defined in the Code of Laws of South Carolina Section 50-5-1330 (Attachment 1) is, as previously stated, the only use for the majority collected in state waters. The MRD's OFM sampled those crabs nine times in April and May of 2005. Females averaged 306.4 mm prosoma width and 8.2 lb. total weight (N=331). Males averaged 235.6 mm prosoma width and 3.3 lb. total weight (N=317). These sizes are consistent with previous year's samples.

The MRD's Crustacean Monitoring Section (CMS) continues to collect data on horseshoe crabs in year-round trawl surveys. Females in 2005 averaged 268.8 mm prosoma width and 6.3 lb. total weight (N=71) with males averaging 232.6 mm prosoma width and 3.2 lb. total weight (N=66). Juveniles averaged 145.7 mm prosoma width and 0.9 lb. total weight (N=19). Catch per tow was slightly lower than in 2004 (Figure 1).

The commercial harvest to supply CRE was all done by hand harvest (16 permits for 2005). No trawl permits were issued primarily because CRE has declined to accept trawl caught individuals due to the extent of unacceptable injury. No permits were issued for scientific or educational purposes in 2005.

IV. Planned Management Programs

There are no plans to modify the existing state law as it pertains to horseshoe crabs. Permitting will continue to be necessary for all aspects of handling and reporting requirements for those permitted are mandatory. MRD will continue to collect prosomal width, weight, and sex data on horseshoe crabs caught in both their CMS trawl survey of estuaries and the OFM fishery dependent survey. Trawl data has been collected in five coastal estuaries since 1995 and biomedical facility data from near 3000 crabs since 2000.

There are no present plans for added effort to monitor habitat and the biomedical industry's post-release mortality with more tagging effort. However, as previously stated, the SCDNR's MRD has already done extensive tagging and habitat evaluation during studies in the late 1990s through 2002 and as other activities suggested by ASMFC are delineated, effort will be made to implement, as funding allows.

Attachment 1

South Carolina law on permitted harvest and handling of horseshoe crab and penalties associated.

SECTION 50-5-1330.

(A) Taking or possessing horseshoe crabs (*Limulus polyphemus*) is unlawful except under permit granted by the department.

(B) The department may permit the taking or possession of horseshoe crabs. Permits granted under this section may include provisions as to lawful fishing areas; minimum size requirements for horseshoe crabs; mesh size and dimensions of nets and other harvesting devices; by catch requirements; fishing times or periods; catch reporting requirements; holding facilities, conditions, and periods; and other conditions the department determines.

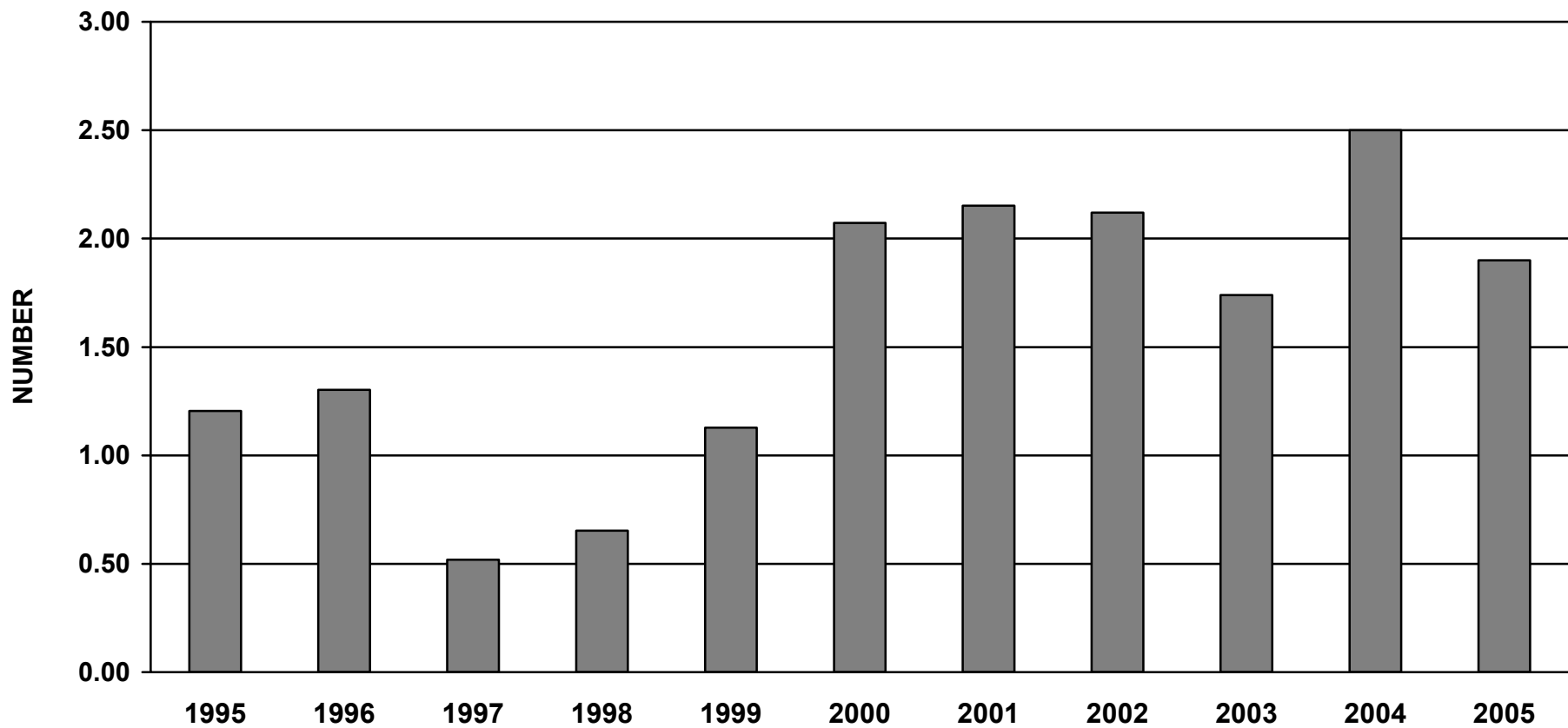
(C) Horseshoe crabs from which blood is collected for production of amebocyte lysate may be held in facilities approved by the department and must be handled so as to minimize injury to the crab. Horseshoe crabs collected in this State must be returned unharmed to state waters of comparable salinity and water quality as soon as possible after bleeding unless subsequent retention is permitted.

(D) The taking of horseshoe crabs incidentally during legal fishing operations does not violate this section if the crabs are returned immediately to the water unharmed.

(E) The department may grant permits to institutions and persons engaged in science instruction or curation to possess no more than five horseshoe crabs or parts thereof for such purposes, and permittees are not required to be licensed under this chapter.

(F) No horseshoe crab collected in South Carolina may be removed from this State.

(G) A person who violates this section or a condition of a permit issued hereunder is guilty of a misdemeanor and, upon conviction, must be fined not less than twenty-five dollars nor more than five hundred dollars or imprisoned for not more than thirty days. Each horseshoe crab or part thereof in violation is considered a separate offense.



**Figure 1. SCDNR Crustacean Monitoring Section horseshoe crab catch rate from trawl surveys.
Sampling changes beginning 2002 require standardized rates.**